

CANCER OF THE UTERUS

BY

HENRY ALBERT WADE, M. D.

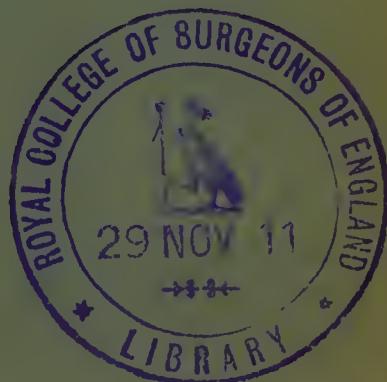
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*Gynecologist to Williamsburg Hospital; Attending
Surgeon to Bethany Deaconess Hospital.*

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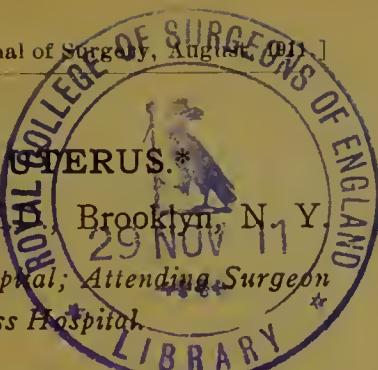
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CANCER OF THE UTERUS.*

By HENRY ALBERT WADE, M.D.,
Gynecologist to Williamsburg Hospital; Attending Surgeon
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Cancer of the uterus has been and will continue to be a subject of absorbing interest to the pathologist and the gynecologist. The frequency with which it occurs, its irresistible progress and its fatal character combine to demand a careful study of its etiology and treatment.

Although cancer was described early in the last century, its etiology is still largely a matter of conjecture. Cases reported from time to time would seem to indicate the possibility of contagion of a parasitic or bacterial nature as the etiological factor in the propagation of the disease.

Waldeyer, however, has demonstrated most conclusively that all carcinomata owe their development to a proliferation of epithelium. Reviewing the incidence of cancer in women, we find that the hypothesis claiming irritating conditions as the causative agent is strongly supported by the fact that the uterus and mammae—parts of the female body especially susceptible to the disease—are the most exposed to irritation.

Again we find that cancer occurs more frequently in the cervix than in the body of the uterus; this is particularly true in the case of multiparae, and it is the cervix which is injured during delivery. Uterine cancer is relatively rare among nulliparae and in them is almost always found in the body of the organ, and this is probably accounted for in that the

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uterus, owing to its shape, may after menstruation retain a quantity of blood and exfoliated mucous membrane, which upon decomposition produces inflammation, and the periodical breaking down of the membrane in the thus weakened area aggravates the condition and favors the development and growth of cancer cells.

Carcinoma in young women is much more rapid in its metastasis than in those past middle life. The reason for this is plain. In young persons the lymphatics are more active than they are later in life—consequently, the rapid spread of the disease in those afflicted at an early age.

Hematogenous metastasis may follow involvement of the lymphatics. Carcinoma cells invade the thoracic duct or are carried by the lymph stream into the veins. Direct hematogenous metastasis is rare and generally fatal. It follows the invasion of the walls of the veins, the emboli of the carcinomatous cells being carried into the general circulation.

Previous to the establishment of the histological basis of cancer, it was generally accepted that these growths showed simply a local constitutional dyscrasia. It was held by some that the virus was present in the blood, and that even if the affected organ were removed the disease would nevertheless develop at some distant site. It is now an unquestioned fact that the beginning of cancer is a purely local phenomenon, but the seeming independent growths occurring later in other organs are really metastases from the primary tumor.

There are in the uterus **three** varieties of mucous membrane: The squamous epithelium in the vaginal portion of the cervix, the branching glands

in the cervical canal, and the tubular glands in the body of the uterus. From each of these three varieties of mucous membrane cancer may develop.

The colored races seem, if we study statistics, to be peculiarly immune from malignant disease. K. I. Sanes has pointed out that the reason for this is that these races have their highest mortality in the precancerous age, while the white have their highest mortality at a considerably later period in life which includes the age in which cancer is most prevalent.

Diagnostic symptoms are at best meager, and in the early stages give little or no clue to the real nature of the disease; hence the value of excision of suspicious material in the cervical portion or curettage of the body of the uterus, and microscopical examination of sections of each, whenever even the slightest uterine hemorrhage occurs that cannot be satisfactorily accounted for. One of the best uses for the curette—and the curette by the way is responsible for a great deal of harm in unskilled hands (more harm than good, I believe, in traumatising clean uteri and spreading infection in unclean ones)—one of the best uses for the curette, I repeat, is in removing scrapings from a suspicious, bleeding uterus. If the organ is not cancerous, the curettage may do some good, and if the microscope shows a carcinomatous condition, a human life may be saved by an immediate and fairly radical hysterectomy. In curetting in cases of malignant disease of the body of the uterus, it is most important to go over the entire surface carefully; if you do not, you may miss the area where the implantation of cancer cells exists. Be especially careful to reach the horns of the uterus.

This organ is more frequently the seat of malignant disease than any other part of the human body, with the possible exception of the stomach. According to Williams, 31 per cent. of all cases of cancer occurring in women have their seat in the uterus. When we stop to consider how much easier it is for us to examine and remove, if necessary, portions of suspicious material from the uterus than it is for the surgeon working on the upper abdomen to obtain a section of a possible malignant growth of the stomach, it is difficult to reconcile the fact that so many women with uterine cancer go on until there is no hope. The reason is, that in the early stages of malignant disease of the womb the usual symptoms which the general practitioner associates with this condition are absent—cachexia, foul smelling vaginal discharge and pain are all late symptoms.

The symptoms which I have found to be present early and to be of fair diagnostic value are: A watery vaginal discharge, especially if the woman has had for some time previously a leucorrhea and notices that it is becoming thinner in character and more profuse in quantity; and, second, a slight bleeding or spotting between the menstrual periods. Bleeding from the uterus after the menopause should always be considered conclusive evidence of carcinoma until it has been proved otherwise.

The first sign of extension of carcinoma may be determined after the plan of Winter: Under an anesthetic introduce two fingers into the rectum and the thumb into the vagina; if an indurated mass is felt close to the cervix, you may feel assured that you have an extension of the disease outside of the uterus. An inflammatory mass in the pelvis is

larger and not so intimately associated with the uterus and is generally accompanied by a rise in temperature.

When we have made a diagnosis of cancer and determined to the best of our ability the extent of the involvement, the advisability or inadvisability of operation remains to be decided, and here enters the personal equation of the surgeon. A case that would present but ordinary difficulties to one operator would be inoperable from the viewpoint of another. Baum and Mackenrodt operate on 90 per cent. of all their cases and report: Mackenrodt 45 per cent., Baum 30 per cent. of patients living after five years. This would indicate that both these operators see their cases unusually early. Frequently, however, we cannot say positively whether a case is an operable one or not, until we have made an exploratory incision. The bladder owing to its intimate relation to the uterus is more frequently and extensively involved than is the rectum, which is separated by the cul-de-sac.

Wertheim and his associate Kinrodt, in an investigation of 345 cases of cervical cancer, removed 50,000 sections of the parametrium and the pelvic lymph glands. These were examined, giving the following results: In 20 per cent. both parametrium and lymph glands were invaded. In 27.5 per cent. the parametrium was invaded without involvement of the lymph glands. In 10 per cent. the lymph glands were involved, the parametrium being free. In 40 per cent. both parametrium and lymph glands did not show infiltration of cancer cells. This is conclusive proof that even in cancerous disease of the cervical portion of the uterus, where owing to its

abundant supply of lymph channels we would expect extension to occur early, we may find the malignant process fairly extensive without extra-uterine involvement.

The glands most frequently found involved are the iliac located between the external and internal iliac vessels and obturator foramen, possibly because these are the ones that are generally looked for and removed. Cancer is never found in glands which are unaltered in size, shape and consistency.

The Wertheim method is giving good ultimate results when the operation is performed by a skilful operator, and this is a point I wish to emphasize. A man capable of resecting or removing an ovary with neatness and despatch may not have the operative ability to extirpate a uterus with its appendages, to dissect out the lymph glands, and remove the vault of the vagina. The primary mortality in the operation of removal of the uterus, parametrium, vaginal vault and lymph glands is very high even when done by a skilful and experienced surgeon, but the end results are good. Wertheim in his first series of 30 cases had an immediate mortality of 60 per cent.; in his last series of 100 cases the mortality was 10 per cent., while he reports 62 per cent. living after five years. It is a question whether the extirpation of the lymph glands has anything more than a prognostic importance, as Wertheim reports that in practically all cases in which the lymph glands were found to be involved and removed, the patient had a recurrence within a year.

I believe that the cautery operation perfected and used by the late Dr. John Byrne has a distinct field of usefulness in cases in which the disease has advanced into the parametrium and where the uterus

is fixed. These comprise almost entirely cases in which the cervix is the primary seat of invasion. The cervix being more generously supplied with lymphatics than is the body of the uterus, extension takes place not upward through the internal os into the latter, but outward into the peritoneal cavity. In this class of cases, the Byrne operation will give the patient decided relief; the discharge will lose its offensive odor and become less in quantity; the pain will be relieved to a very marked degree, and owing to the lessened amount of septic material absorbed, the cachexia will be less noticeable.

The Kraske method of removing the coccyx and inferior part of the sacrum up to the third sacral foramen has been used, but not at all extensively; the immediate mortality is enormous. Hochenegg reported the first Kraske's operation for removal of the uterus on the living subject. The Hegar modification of this procedure consists in depressing the coccyx and inferior part of the sacrum in place of removing them.

In my own cases I have obtained my best results, both immediate and remote, by the following method:

First, the interior of the uterus and cervix is swabbed with iodine and packed with iodoform gauze; then a fairly wide dissection of the vaginal vault is made, and the bladder separated anteriorly and the rectum posteriorly. All bleeding must be promptly stopped. This work I do per vaginam.

While the patient is being placed in the Trendelenburg position, a fresh toilet of the hands is made and the gloves changed.

A median abdominal incision is now made and the broad ligaments, the glands at the bifurcation of

the common iliac vessels, and the utero-sacral ligaments and glands carefully examined. If this examination shows no considerable extension of the disease, the broad ligaments are removed as close as possible to the sides of the pelvis. The uterus is then brought out of the abdominal cavity by means of a tenaculum and the dissection of the bladder anteriorly and the rectum posteriorly carried down to meet the dissection begun in the vagina. *The lymph glands are not removed*, for by doing so the operation is much prolonged, increasing shock and adding greatly to the immediate mortality. Results so far have not justified this risk; as I have previously said, even Wertheim admits that where the glands were involved and removed the patient died within a year. If we can keep these patients alive for even a few years, I am convinced that the laboratory will solve a method of curing them.

In my opinion all uterine cancers should be operated on through an abdominal incision. In removing the uterus and its appendages, it is important that we do not ligate the tissues en masse. The bloodvessels should be identified and tied separately. The general surgeon in amputating an extremity does not ligate the stump en masse, but carefully locates the bloodvessels and ties them off separately.

We can readily see how much more important it is not to traumatisé by means of a ligature innocent tissue in the peritoneal cavity, where exudates form so readily only to be turned into connective tissue later on. My method is to clamp the broad ligament, but not too tightly, and then after cutting on the distal side of the clamp to remove it and catch up the bloodvessels individually and ligate them.

In all operative work it is exceedingly important that there be no unnecessary loss of blood. In a prolonged operation this matter of hemostasis is of particular importance, and care and attention, as far as is consistent with quick work, should be given to the prevention of constant oozing, which would otherwise aggregate a moderately severe hemorrhage, especially as most of these women afflicted with cancer have a low percentage of hemoglobin and bear loss of blood poorly.

What value the vaccine method of treating this disease has, or what the probable ultimate result of the work of investigation now being done along this line may be, it is far too early to say. Dr. S. P. Beebe, of Cornell Medical College, who has done some very valuable work, is quite optimistic and states that the results obtained in some cases of cancer pronounced incurable are most promising.

In the present status of our knowledge upon this subject, by far the most important thing is that we see these cases earlier.

The importance of early recognition and of treatment begun during the benign stage of cancer cannot be too widely or too thoroughly taught.

Dr. Chase in his preliminary report on the mortality of cancer in the United States, as given by the census of 1910, states that one out of every twelve hundred of our population dies of cancer every year, notwithstanding the fact that it is rarely, if ever, on the lists of diseases which boards of health require to be reported. That cancer of the uterus is becoming more and more frequent among the civilized peoples of the world, all available statistics prove. Thousands of unsuspecting women in apparently good health to-day will, within a period

of one year, perhaps less, be dying from this affliction.

That great progress has been made during the last century in combating this dreaded disease, none will gainsay. Yet at the beginning of this twentieth century we are facing a problem of gigantic proportions, with but an imperfect working knowledge. That surgery is an inadequate factor in the treatment of cancer, results have shown. The x-ray and radium have each but a limited field of usefulness. All that remains then for us to do is to work faithfully and patiently, directing our greatest efforts toward applying with our best judgment and ability the knowledge already gained, neglecting no opportunity to relieve the afflicted and to teach those who will take our place, until perhaps in this age of laboratories, pathologists, vaccine and serum therapy, a second Pasteur will come to guide us.

475 Greene avenue.